UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

OPEN-FILE REPORT 80-802
PLATE 1

EXPLANATION

QUATERNARY

Qd — Undifferentiated Quaternary deposits

Area completely cover with undifferentiated surficial deposits of Quaternary age

Oligocene(?) and Miocene(?)

Intrusive igneous rocks

The following sedimentary rocks are mantled with surficial deposits ranging from o to 300 feet in thickness over much of the map area

Oligocene

To — Lower part of the Ohanapecosh Formation

Greenish-gray conglomerate, sandstone, siltstone, and shale composed of water-laid andesite and basaltic volcanic rock detritus, and tuff

TERTIARY

Eocene

Upper(?) Eocene

Ts — Spiketon Formation

Light-gray to buff micaceous arkosic sandstone and siltstone, and gray to black shale and coal.

Upper Eocene — **Puget Group**

Tn — Northcraft Formation

Dark-reddish-brown to dark-greenish-gray andesitic and basaltic pyroclastic breccia, volcanic mudflow breccia, flow(?) breccia, and minor interbeds of volcanic sandstone, conglomerate and tuff

Middle(?) Eocene

Tc — Carbonado Formation

Light-gray to buff micaceous arkosic sandstone and siltstone, and gray to black shale and coal.

Contact

Approximately located; queried where location uncertain

Fault, showing dip

Approximately located; queried where hypothetical; U, upthrown side; D, downthrown side

Anticline

Approximately located; showing trace of axial plane

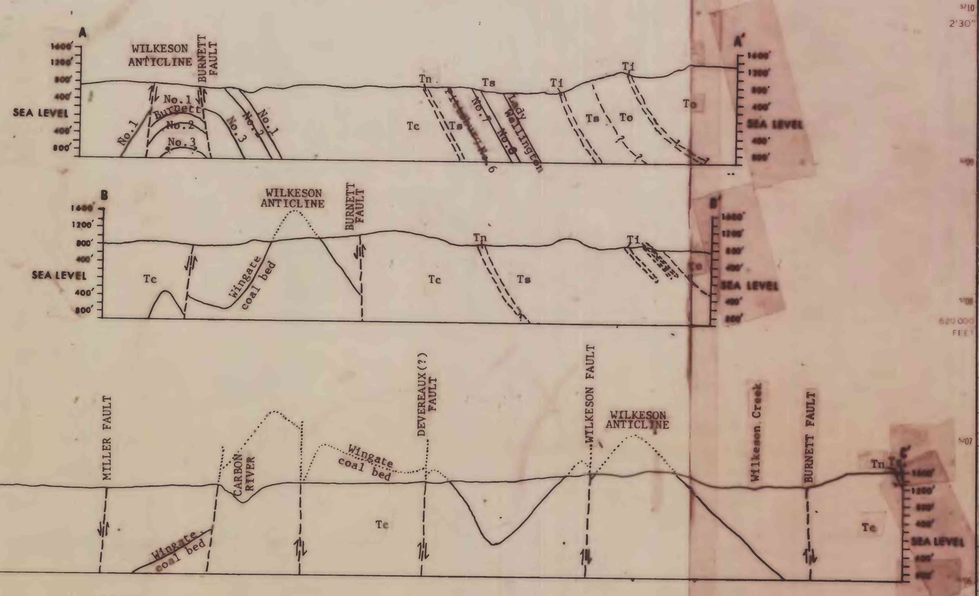
Syncline

Approximately located; showing trace of axial plane

Strike and dip of beds

Strike of vertical beds

Portal of mine tunnel



Mapped, edited, and published by the Geological Survey

Control by USGS and USC&GS

Topography from aerial photographs by multiplex methods
Aerial photographs taken 1954. Field check 1956

Polyconic projection. 1927 North American datum
10,000 foot grid based on Washington coordinate system, south zone
1000-meter Universal Transverse Mercator grid ticks, zone 10, shown in blue

UTM GRID AND 1968 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

Geology modified from Gard (1968, pl. 1).

WASHINGTON
QUADRANGLE LOCATION

GEOLOGIC MAP AND CROSS SECTIONS OF THE WILKESON-CARBONADO COAL FIELD, PIERCE COUNTY WASHINGTON